

What is claimed is:

- Sub-B'*
1. A polypeptide comprising an amino acid sequence which is at least 80% identical over its entire length to an amino acid sequence selected from the group consisting of SEQ ID NOS: 2-4, 6, and 8-12.
 2. A polynucleotide encoding an amino acid sequence which is at least 80% identical over its entire length to an amino acid sequence selected from the group consisting of SEQ ID NOS: 2-4, 6, and 8-12.
 3. A polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1/5 and 21.
 4. A polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOS: 2-4, 6, and 8-12.
 5. An agonist that activates the interaction of an HFGAN72 receptor ligand and HFGAN72 receptor, wherein said receptor ligand is a polypeptide comprising an amino acid sequence which is at least 80% identical to an amino acid selected from the group consisting of SEQ ID NOS: 2-4, 6, and 8-12.
 6. An antibody against the interaction of an HFGAN72 receptor ligand and HFGAN72 receptor, where said receptor ligand is a polypeptide comprising an amino acid sequence which is at least 80% identical to an amino acid selected from the group consisting of SEQ ID NOS: 2-4, 6, and 8-12.
 7. An antagonist that inhibits the interaction of an HFGAN72 receptor ligand and HFGAN72 receptor, where said receptor ligand is a polypeptide comprising an amino acid sequence which is at least 80% identical to an amino acid selected from the group consisting of SEQ ID NOS: 2-4, 6, and 8-12.
 8. A method for the treatment of a patient having need to inhibit interaction of an HFGAN72 receptor ligand and HFGAN72 receptor comprising administering to the patient a therapeutically effective amount of the antagonist of claim 7.

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9. A method for the treatment of a patient having need to inhibit interaction of an HFGAN72 receptor ligand and HFGAN72 receptor comprising administering to the patient a therapeutically effective amount of the antibody of claim 6.

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10. A method for the treatment of a patient having need to promote interaction of an HFGAN72 receptor ligand and HFGAN72 receptor comprising administering to the patient a therapeutically effective amount of the agonist of claim 5.

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11. A method for identifying compounds which bind to and activate the interaction of an HFGAN72 receptor ligand polypeptide comprising an amino acid sequence which is at least 80% identical to an amino acid selected from the group consisting of SEQ ID NOs: 2-4, 6, and 8-12 with HFGAN72 receptor comprising:

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(a) contacting a cell expressing on the surface thereof an HFGAN72 receptor, said receptor being associated with a second component capable of providing a detectable signal in response to the binding of a compound to said receptor, with a compound to be screened under conditions to permit binding to the receptor; and

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(b) determining whether the compound binds to and activates the interaction of HFGAN72 receptor ligand and HFGAN72 receptor by detecting the presence or absence of a signal generated from the interaction of the receptor ligand with the receptor.

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12. A method for identifying compounds which bind to and inhibit the interaction of an HFGAN72 receptor ligand polypeptide comprising an amino acid sequence which is at least 80% identical to an amino acid sequence selected from the group consisting of SEQ ID NOs: 2-4, 6, and 8-12 with HFGAN72 receptor comprising:

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(a) contacting a cell expressing on the surface thereof an HFGAN72 receptor, said receptor being associated with a second component capable of providing a detectable signal in response to the binding of a compound to said receptor, with a compound to be screened under conditions to permit binding to the receptor; and

(b) determining whether the compound binds to and inhibits the interaction of HFGAN72 receptor ligand and HFGAN72 receptor by detecting the presence or absence of a signal generated from the interaction of the receptor ligand with the receptor.

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A polypeptide comprising the amino acid sequence of SEQ ID NO: 4.

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Sub B2

*Sub B2
cont*

14. A polypeptide comprising the amino acid sequence of SEQ ID NO: 8.
15. The method of claim 8 for the treatment of obesity, diabetes, anorexia nervosa, bulimia, cachexia, chronic renal failure, renal disease, congestive heart failure, impaired glucose tolerance, and sexual dysfunction.
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16. The method of claim 10 for the treatment of anorexia nervosa, bulimia, and cachexia.

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